

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A method of detecting osteoporosis in a individual to be tested comprising:

- a) obtaining a sample of a bone related tissue or cells;
- b) assaying the concentration of at least one marker selected from the group consisting of
 - (i) a bacteria is selected from the group consisting of *Staphylococcus aureus*, *Porphyromonas gingivallis*, *Eikenella corrodens*, *Acrinobacillus actinomycetemcomitans*, *Prevotella intermedia*, *Campylobacter rectus*, *Staphylococcus epidermidis*, *Salmonella spp.*, *Neisseria gonorrhoea*, *Neisseria meningitis*, *Mycobacterial tuberculosis*, *Haemophius influenzae*, *Pasteurella multocida*, *B. bronchiseptica*, and *Fusobacterium nucleatum*[[.]],
 - (ii) a bacterially produced factor selected from the group consisting of endotoxin-LPS, gapstatin, and dermonecrotic toxin (DNT), and
 - (iii) a heat shock protein (HSP) produced in response to an infectious agent, the HSP selected from the group consisting of HSP 60, gp 96, cpn20, ubiquitin, and cpn 30; and
- c) comparing the concentration of the at least one marker with the concentration of the marker in a sample of the same bone related tissue or cells from a control individual who does not have osteoporosis.

2. (Allowed) The method of claim 1 further comprising comparing the concentration of a first marker with concentrations of a same marker obtained from the same individual over a period of time.

5. (Allowed) The method of claim 2 wherein the time period is at least about 12 hours.

6. (Allowed) The method of claim 1 wherein the sample comprises bone cells or body fluid.

7. (Allowed) The method of claim 1 wherein the HSP is HSP 60.
9. (Allowed) The method of claim 1 wherein the HSP is ubiquitin.
10. (Allowed) The method of claim 1 wherein the concentration of HSP is measured using an immunoassay.
11. (Allowed) The method of claim 1 wherein the concentration of HSP is measured using an assay for a nucleotide molecule encoding HSP.
16. (Allowed) The method of claim 1 wherein the factor is selected from the group consisting of gapstatin and dermonecrotic toxin.
17. (Allowed) The method of claim 1 wherein the factor is gapstatin.
18. (Allowed) The method of claim 1 wherein the factor is dermonecrotic toxin.
19. (Allowed) The method of claim 1 wherein the bacteria is selected from the group consisting of *Staphylococcus aureus*, *Actinobacillus actinomycetemcomitans*, *Bordetella bronchiseptica*, and *Fusobacterium nucleatum*.